# Water Quality

## ANNUAL REPORT 2000

A copy of this report is available on Fresno City's website. It can be found at www.ci.fresno.ca.us/public_utilities/h20ccr2000.pdf

**Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.**

**Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug neeg uas totaub txog nws.**

**Chi tiết này thật quan trọng, xin nhờ người dịch cho quý vị.**

Delivering high quality drinking water is the job of the City of Fresno Water Division.

## What's in This Report?

This Annual Water Quality Report, prepared in cooperation with the California Department of Health Services, provides important information about Fresno's water supply, water quality and water delivery system. Test results for Fresno's 2000 Water Quality Monitoring Program are summarized on pages 3 and 4. Before reviewing this water quality information, it is important to read the messages from the US Environmental Protection Agency (USEPA) and from your City of Fresno Water Division. These are found on pages 2 – 5.

## Conserve Water and Help Keep the Lights On

The City of Fresno Water Division is dedicated to delivering high quality and affordable water to your tap. This summer and throughout the next year, our community faces special challenges as we deal with the impacts of California's energy crisis. State experts predict rolling blackouts as summer energy demand increases. Blackouts are a very real threat to public safety and hurt our local economy.

Electricity for water delivery represents one of Fresno's largest energy demands. On pages 6 and 7 you will find some practical things you can do to keep energy costs down, protect our valuable water supplies and help keep our lights on.

## Questions?

WATER QUALITY
**498-4136**

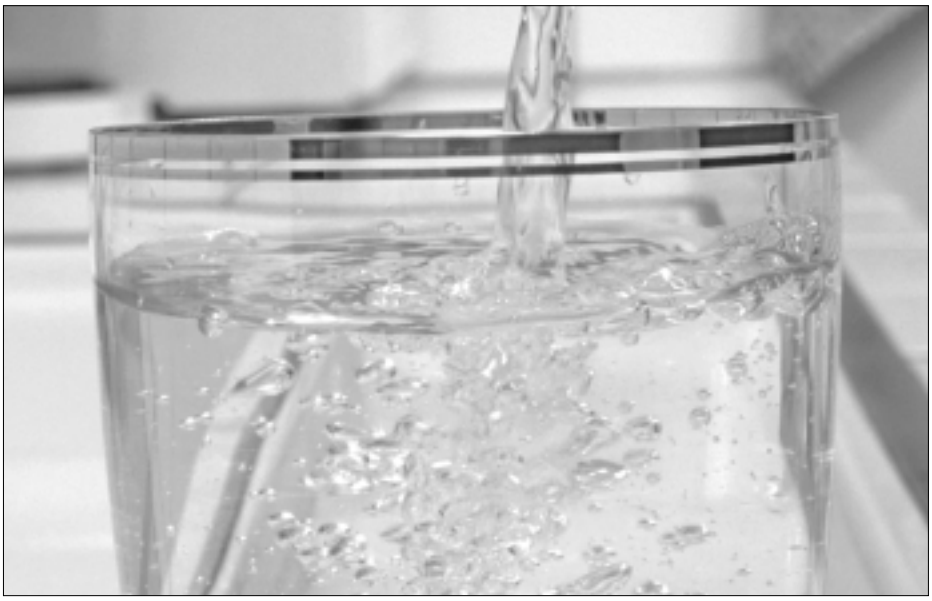
WATER CONSERVATION
**498-1016**

Need a speaker for your school, community group or service club about

WATER ISSUES?
**498-4674**

WATER DIVISION
**498-1458**

City of FRESNO
DEPARTMENT OF PUBLIC UTILITIES



# Drinking Water Quality in Fresno in 2000

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

### *Contaminants that may be present in source water include:*

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the State Department of Health Services prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

The tables on pages 3 and 4 list all the drinking water contaminants that we detected or tested for during the 2000 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 - December 31, 2000. The State requires the Water Division to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Therefore, some of the data contained in this report, though representative of the water quality, is more than one year old.

## Terms and Abbreviations

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Range of Detections:** The minimum and maximum results for detected contaminants. In some instances, the maximum detected result may be higher than the MCL. Water utilities are required to collect follow-up samples to confirm the presence of contaminants above the MCL. If confirmed, additional sampling is conducted for a specified period and the results are averaged to determine whether the source is in compliance with drinking water standards.

**AL:** action level
**n/a:** not applicable
**nd:** not detectable at testing limit

**ug/L:** micrograms per liter or parts per billion
**ng/L:** nanograms per liter or parts per trillion.
**mg/L:** milligrams per liter or parts per million
**pCi/L:** picocuries per liter (a measure of radiation)

# Table 1 – Primary Standards and Unregulated Contaminants

This following table summarizes water quality sample results from the past year. The State allows the Water Division to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, are more than one year old. All samples were taken from 250 wells and/or treatment sites, except lead, copper and microbiological samples, which are also collected from the distribution system. Minimum, maximum and average values are listed for all analyzed constituents with detectable values above the detection limit for reporting. The average values represent hundreds or thousands of analyses, taken from active wells. Any well that violates permissible standards is treated or closed, or customers are directly notified. Treatment processes include air stripping, granular activated carbon filtration, sequestering with chemical additives or a combination of these three.

| | MCL | PHG (MCLG) | Fresno Average | Range of Detections | MCL Violation | Last Sampled | Typical Source of Contaminant |
|---|---|---|---|---|---|---|---|
| **Inorganic Contaminants** | | | | | | | |
| Arsenic (As) (ug/L) | 50 | n/a | 1.83 | nd - 11 | No | 2000 | Erosion of natural deposits; runoff from orchards; glass and electronics production wastes |
| Barium (Ba) (ug/L) | 1 | (2) | 0.014 | nd - 0.21 | No | 2000 | Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits |
| Chromium (Total Cr) (ug/L) | 50 | 2.5 | 0.315 | nd - 12 | No | 2000 | Discharge from steel and pulp mills and chrome plating; erosion of natural deposits |
| Fluoride (F) Temp Dependent (mg/L) | 2 | 1 | 0.076 | nd - 0.8 | No | 2000 | Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nickel (ug/L) | 100 | n/a | 0.282 | nd - 20 | No | 2000 | Erosion of natural deposits; discharge from metal factories |
| Nitrate as N03 (mg/L) | 45 | 45 | 19 | 2 - 51 * | No | 2000 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Nitrite as Nitrogen (ug/L) | 1 | 1 | 0.002 | nd - 0.57 | no | 2000 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Selenium (Se) (ug/L) | 50 | (50) | 0.008 | nd - 2 | No | 2000 | Erosion of natural deposits; discharge from petroleum, glass and metal refineries; discharge from mines and chemical manufactures; runoff from livestock lots (feed activities) |
| **Radionuclides** | | | | | | | |
| Gross Alpha (pCi/L) | 15 | (0) | 2.78 | -1.65 - 25.25 | No | 1999 | Erosion of natural deposits |
| Radium 226 (pCi/L) | 3 | none | 0.32 | -0.82 - 4.1 | No | 1999 | Erosion of natural deposits |
| Radium 228 (pCi/L) | 2 | none | -0.26 | -0.26 | No | 1999 | Erosion of natural deposits |
| Radon (pCi/L) | none | none | 611 | 1 - 2708 | No | 1995 | Erosion of natural deposits |
| Uranium (pCi/L) | 20 | (0) | 2.075 | 1.86 - 2.29 | No | 1996 | Erosion of natural deposits |
| **Synthetic Organic Contaminants** | | | | | | | |
| Dibromochloropropane (DBCP) (ng/L) | 200 | 1.7 | 36 | nd - 200 | No | 2000 | Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit |
| Ethylene Dibromide (EDB) (ng/L) | 50 | (0) | 2.3 | nd - 86 ** | No | 2000 | Discharge from petroleum refineries; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching from grain and fruit crops |
| **Volatile Organic Contaminants** | | | | | | | |
| 1,1-Dichloroethylene (ug/L) | 6 | 10 | 0.005 | nd - 1.6 | No | 2000 | Discharge from industrial chemical factories |
| cis-1,2-Dichloroethylene (ug/L) | 60 | (70) | 0.024 | nd - 5 | No | 2000 | Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination |
| Dichloromethane (ug/L) | 5 | 4 | 0.003 | nd - 0.8 | No | 2000 | Discharge from pharmaceutical and chemical factories; insecticide |
| Tetrachloroethylene (PCE) (ug/L) | 5 | 0 | 0.089 | nd - 4.6 | No | 2000 | Discharge from factories, drycleaners, and auto shops (metal degreaser) |
| Toluene (ug/L) | 150 | 150 | 0.003 | nd - 0.6 | No | 2000 | Discharge from petroleum and chemical factories; underground gas tank leaks |
| Total Trihalomethanes (THM's) (ug/L) | 100 | n/a | 0.057 | nd -10.68 | No | 2000 | Byproduct of drinking water chlorination |
| Trichloroethylene (TCE) (ug/L) | 5 | 0 | 0.413 | nd - 11 *** | No | 2000 | Discharge from metal degreasing sites and other factories |
| Xylene (mg/L) | 1.75 | 1.8 | 0.002 | nd - 0.8 | No | 2000 | Discharge from petroleum and chemical factories; fuel solvent |
| **Unregulated Contaminants** | | | | | | | |
| 1,2,4-Trimethylbenzene | n/a | n/a | 0.013 | nd - 1.4 | No | 2000 | EPA regulations require us to monitor unregulated contaminants while EPA considers setting limits on them. |
| 1,3,5-Trimethylbenzene | n/a | n/a | 0.002 | nd - 0.9 | No | 2000 | |
| Bromodichloromethane (THM) | n/a | n/a | 0.008 | nd - 1.2 | No | 2000 | |
| Bromoform (THM) | n/a | n/a | 0.005 | nd - 1.1 | No | 2000 | |
| Butylbenzene | n/a | n/a | 0.002 | nd - 0.9 | No | 2000 | |
| Chloroethane | n/a | n/a | 0.003 | nd - 0.6 | No | 2000 | |
| Chloroform (THM) | n/a | n/a | 0.049 | nd - 8.4 | No | 2000 | |
| Chloromethane | n/a | n/a | 0.004 | nd - 2.6 | No | 2000 | |
| Dibromochloromethane (THM) | n/a | n/a | 0.001 | nd - 0.6 | No | 2000 | |
| Dichlorodifluoromethane | n/a | n/a | 0.636 | nd - 29 | No | 2000 | |
| Dichloropropane | n/a | n/a | 0.185 | nd - 85 | No | 2000 | |
| Metolachlor | n/a | n/a | 0.495 | nd - 0.5 | No | 2000 | |
| Metribuzin | n/a | n/a | 0.495 | nd - 0.5 | No | 2000 | |
| Naphthalene | n/a | n/a | 0.001 | nd - .52 | No | 2000 | |

* **Regarding Nitrate** - A single result exceeding an MCL must have a confirmation sample collected in order to confirm the high level reported by analysis. For an accute contaminant such as nitrate, the original and 1 confirmation sample is averaged for compliance purposes. In this situation the 2 samples collected from the well 155-2 averaged 51 mg/L. No violation exists because the well was removed from service immediately after confirmation.

** **Regarding EDB** - As post treatment sample results approach the MCL at GAC treatment sites, the monitoring frequency increases. When results reach 75% of the MCL, samples are analyzed weekly until the MCL is reached at which time the well is turned off and GAC replacement is scheduled. At well 297, the result went from under the MCL of 50 ng/L to 86 ng/L in one week. The well was immediately turned off.

*** **Regarding TCE** - A single sample result exceeding the MCL for a less than accute contaminant such as TCE must first be verified with 1 or 2 follow-up samples. If the average exceeds the MCL, the utility is allowed to operate the affected source for up to 6 additional months and collect samples no less than monthly. The average of all results are used to determine compliance. In this situation, well 265 confirmed above the MCL and was removed from service. No violation exists because the well was removed from service immediately after confirmation.

## Table 2 – Microbiological Contaminants

Over 240 bacterilogical samples are collected every month in Fresno's distribution system.
In addition, over 300 bacterilogical samples are collected from wells and treatments sites.

| Contaminant | Highest No. of Detections | No. of Months In Violation | MCL | MCLG | Typical Source of Bacteria |
|---|---|---|---|---|---|
| Total Coliform Bacteria | 3 of 310 or 0.96% | 0 | 5% | 0 | Naturally present in the environment |
| E. coli | 1 * | 0 | A routine sample is positive for E. coli and a repeat sample is positive for total, fecal or E. coli bacteria. | 0 | Human or animal fecal waste |

* 1 routine sample was positive for E. coli. 3 immediate follow-up samples were negative for all coliform activity.

## Table 3 – Lead and Copper

Lead and Copper samples are collected from wells, the distribution system and from inside residences.

| Contaminant | No. of Samples Collected | 90th Percentile Level Detected | No. of Sites Exceeding Action Levels | Action Level | MCLG | Typical Source of Contaminant |
|---|---|---|---|---|---|---|
| Lead (ug/L) (Sampled in 1999) | 50 | 2.5 | 1 | 15 | 2 | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ug/L) (Sampled in 1999) | 50 | 0.27 | 0 | 1.3 | 0.17 | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

## Table 4 – Secondary Standards Contaminants List

Secondary standards are based on aesthetic factors (taste and odor, etc.) and are not health-related.

| Name | MCL | Fresno Average | Range of Detections | MCL Violation |
|---|---|---|---|---|
| Aluminum (Al) (ug/L) | 200 | 0.2 | nd - 50 | No |
| Apparent Color (Units) | 15 | 1.05 | nd - 15 | No |
| Chloride (Cl) (mg/L) | 500 | 9.82 | 2 - 40 | No |
| Iron (Fe) (ug/L) | 300 | 15.66 | nd - 720 | Yes * |
| Manganese (Mn) (ug/L) | 50 | 2.33 | nd - 170 | Yes ** |
| Odor (Threshold @ 60 C) (Units) | 3 | 1.01 | 1 - 3 | No |
| Sodium (Na) (mg/L) | 0 | 19.85 | 5 - 49 | No |
| Specific Conductance (E.C.) (umhos) | 1600 | 328 | 90 - 780 | No |
| Sulfate (SO4) (mg/L) | 500 | 10.46 | 2 - 60 | No |
| Total Dissolved Solids (TDS) (mg/L) | 1000 | 211.69 | 28 - 510 | No |
| Total Hardness (as CaCO3) (mg/L) | 0 | 125.61 | 29 - 440 | No |
| Turbidity (N.T.U.) | 5 | 0.14 | nd - 2.2 | No |
| Zinc (Zn) (ug/L) | 5000 | 10.88 | nd - 2000 | No |

* Three wells exceeded the aesthetic standard for iron.

** Four wells exceeded the aesthetic standard for manganese.

## Table 5 – Contaminants Not Found In Fresno Water

No detections of these compounds occured in 2000.

2,4,5-TP (Silvex)
2,4,5-T
2,4-D
2-Chloroethylvinyl Ether
Acenaphthylene
Acetone
Acrolein
Aldicarb (Sulfone)
Aldicarb (Sulfoxide)
Aldicarb (Temik)
Aldrin
Anthracene
Antimony
Arochlor - 1016
Atrazine (Aatrex)
Banvel (Dicamba)
Bentazon (Basagran)
Benzene
Benzo (B) Flouranthene
Benzo(a) Anthracene
Benzo(a)pyrene
Benzo(K) Flouranthene
Benzyl Butyl Phthalate
Beryllium
Boron
Bromacil (Hyvar)
Bromobenzene
Bromochloromethane
Bromomethane
Butachlor
Carbaryl
Carbofuran (Furadan)
Carbon Disulfide
Carbon Tetrachloride
Chlordane
Chloroethyl (ether)
Chloroethylvinyl ether
Chlorothalonil (Daconil, Bravo)
Chlorotoluene
Chrysene
Cyanide
Dalapon (Dowpon)
Demeton
Diazinon
Dibenzo (a,h) Antracene
Dibromomethane (Methylene Bromide)
Dichlorobenzene (m-DCB)
Dichlorobenzene (o-DCB)
Dichlorobenzene (p-DCB)
Dichloroethane (1,1-DCA)
Dichloroethane (1,2-DCA)
Dichloroethylene (Trans 1,2-DCE)
Dichloropropane (1,3-)
Dichloropropane (2,2-)
Dichloropropene
Dichloropropene (1,1-)
Dichloropropene (1,3-) (Total)
Dichloropropene (cis 1,3-)
Dichloropropene (Trans 1,3-)
Dieldrin
Diethylhexyladipate
Diethylhexylphthalate (DEHP)
Diethylphthalate
Dimethoate (Cygon)
Dimethylphthalate
Di-n-Butylphthalate
Dinitrotoluene
Dinoseb
Diquat
Disulfoton
Diuron (Karmex)
Endothall
Endrin
Epoxide
Ethyl tert-Butyl Ether (ETBE)
Ethylbenzene
Flourene
Glyphosate
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hydrocarbon Oil and Grease
Hydroxide (OH)
Hydroxycarbofuran
Isophorone
Isopropylbenzene (Cumene)
Isopropyltoluene
Lindane (Gamma-BHC)
Magnesium (Mg)
Mercury (Hg)
Methomyl
Methoxychlor
Methyl Ethyl Ketone (MEK, Butanone)
Methyl Isobutyl Ketone
Methyl-tert-Butyl Ether (MTBE)
Molinate (Ordram)
Monochlorobenzene (Chlorobenzene)
N-Butylbenzene
Nitrate Nitrogen
Nitrite (NO2)
Nitrite Nitrogen (N02-N)
Nitrobenzene
N-Propylbenzene
Oxamyl (Vydate)
Pentachloroethane
Pentachlorophenol (PCP)
Perylene
Phenanthrene
Picloram
Polychlorinated Biphenyl's (PCBs)
Prometon
Prometryn (Caparol)
Propachlor
Pyrene
Pyrene (1,2,3-cd)
Sec-Butylbenzene
Silver (Ag)
Simazine (Princep)
Styrene (Vinyl Benzene)
Tert-amyl-Methyl Ether (TAME)
Tert-Butylbenzene
Tetrachloroethane
Thallium
Thiobencarb (Bolero)
Total Oil and Grease
Toxaphene
TP (Silvex)
Trichlorobenzene (1,2,3-)
Trichlorobenzene (1,2,4-)
Trichloroethane (1,1,1-TCA)
Trichloroethane (1,1,2-TCA)
Trichlorofluoromethane (Freon 11)
Trichloropropane (1,2,3-)
Trifluralin
Trimethylbenzene (1,2,4-)
Trimethylbenzene (1,3,5-)
Vinyl Chloride

# Information from the EPA About Possible Contaminants

Leaky Acres is the foundation for one of the largest artificial recharge programs in the nation.

**Radon:** Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the US. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will, in most cases, be a small source of radon in indoor air.

Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or call EPA's Radon Hotline (800-SOS-RADON).

**Nitrate:** Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, you should ask advice from your health care provider, or choose to use bottled water for mixing formula and juice for your baby. If you are pregnant, you should drink bottled water. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

**Iron and Manganese:** Iron was found at levels that exceed the secondary MCL of 300 ug/L and manganese was found at levels that exceed the secondary MCL of 50 ug/L: These MCLs were set to protect you against unpleasant aesthetic affects such as color, taste, odor and the staining of plumbing fixtures (e.g., tubs and sinks), and clothing while washing. The high iron and manganese levels are due to leaching of natural deposits. Since violating this MCL does not pose a risk to public health, the State allows the affected community to decide whether or not to treat to remove it.

**DBCP:** An agricultural chemical used to control nematodes in soil, DBCP use was prohibited in 1977. It was discovered in some groundwater wells in the San Joaquin Valley and other locations in California. The State of California and the USEPA established an MCL at 0.2 parts per billion in 1989, leading to the closure of many wells. An even lower "Recommended Public Health Level" (RPHL) was proposed at 0.002 parts per billion in the early 1990s, but was never formally adopted.

As a part of the routine review of MCLs conducted by the State of California, the Department of Health Services reviewed the MCL for DBCP in 1999. Their review confirmed that the current MCL of 0.2 parts per billion is appropriate and protective of public health. This action signals that there has been no new evidence indicating the MCL should be changed. The California Environmental Protection Agency, in an independent action, established a "Public Health Goal" for DBCP in 1999. This level was set at 0.0017 parts per billion, equivalent to the proposed RPHL of 0.002 parts per billion.

# Assuring a Stable Water Supply Is Essential to Fresno's Future

The Water Division is dedicated to delivering a high quality, reliable supply of water to our community now and in the future. A stable water supply is essential to serving the needs of our future residents, the majority of whom will come from our children forming families.

Fresno's high water use, combined with increasing competition for dwindling supplies and California's energy crisis, create immediate challenges for assuring a stable water supply.

## Immediate Challenge: California's Energy Crisis

Throughout California, residents are preparing for rolling blackouts this summer. In Fresno, the combination of increased water use during the hot summer months and anticipated rolling blackouts could produce dangerously low water pressures.

Fresno relies on 250 wells to provide water to its customers. About 25 of these wells are equipped with emergency generators and another 85 are on protected circuits. These protected wells are strategically positioned to maintain power to operate critical care facilities and essential infrastructure.

During the winter and spring, rolling blackouts had little effect on water supply because water demand was about 33% of what it is in the summer. This summer only conservation can reduce the occurrence and frequency of rolling blackouts.

### *Water Use and Rolling Blackouts*

When any part of the City is experiencing a rolling blackout:

1. **Limit water use.**
2. **Do not irrigate landscaping.**
3. **Cut electricity use.**

### *If your area is without electricity:*

1. **Use as little water as possible.**
2. **Avoid showers and toilet flushing until power is restored.**

To help reduce the frequency of rolling blackouts, conserve water at all times.

### *Continuing Challenges: High Water Use*

Fresno has limited water supplies. Without the surface water from local rivers and artificial recharge, our groundwater supply would disappear. Even with these efforts, the groundwater table has dropped 70 feet since 1945.

Fresno uses more water per person than almost any other California city – 265 gallons per person, per day.

### Average Water Use

*Gallons Per Person Per Day*

| | |
|---|---|
| **Fresno** | **265** |
| Clovis | 199 |
| San Jose | 145 |
| Los Angeles | 140 |

## Water is Power

*Conserve water and help keep the lights on.*

With rolling blackouts looming over our heads, we all need to find ways to conserve energy. One way that is commonly overlooked is to conserve water.

### *Power Facts*

- Fresno water users waste at least 14 billion gallons of water each year.
- It takes 20 billion watt hours of electricity and over $2.5 million just to pump that wasted water.

That's a lot of wasted water and a lot of wasted electricity at a time when power is already scarce. Most water and energy waste occurs during landscape irrigation. Plug into the power of conserving water. Help keep the lights on.

Fresno's Class 1 CVP contract is essential to a stable water supply.

### City Efforts to Assure a Stable Supply

We cannot continue to take out more water than we return to our aquifer. Programs have been developed and must be implemented to balance our water budget and reverse the overdraft of our aquifer. Shown on these pages are some of the things the City is doing to assure a stable supply now and in the future.

### Fresno's Bureau Contract

Renewal of Fresno's contract with the Bureau of Reclamation for 60,000 acre feet annually of Central Valley Project (CVP) water from the San Joaquin River is essential to avoiding serious groundwater overdraft in the area.

The US Bureau of Reclamation has stated that renewal of the City's CVP contract is contingent upon implementing a metering program for all single-family residences. All businesses, industries and multi-family customers served by the City of Fresno are already metered. The City is currently in negotiations with the Bureau and is pursuing strategies to renew this vital contract.

### Treat Surface Water

The region's first Surface Water Treatment Facility will relieve pumping pressure on our groundwater and should be online by 2003. This project will add another 20 million gallons of water each day for customers, about 15% of the City's water demand.

### More Basins to Expand Groundwater Recharge

While Fresno has one of the largest artificial recharge programs in the nation, more basins will be brought online to increase recharge amounts. Currently, more than 16 billion gallons are returned to the aquifer each year at dedicated City basins such as Leaky Acres, and at Fresno Metropolitan Flood Control District stormwater basins.

### Water Quality Protection

Millions of dollars are spent each year ensuring the water we provide is safe and clean. Because groundwater contamination continues to be a serious problem, we must make every effort to protect our groundwater from contaminants that can be released into the environment by agricultural, industrial and urban activities.

### About Water Treatment.

Several treatment methods are used by the Fresno City Water Division to ensure that drinking water meets Safe Drinking Water Standards, a prime consideration at the Water Division. As such, a number of drinking water wells operated by the division require treatment for contaminants that exceed the MCL, specifically DBCP, EDB and TCE. The most practical method for removing these contaminants is through contact vessels filled with granular activated carbon, GAC. The City uses this method at 28 treatment sites, treating water from 32 wells. Another method used for volatile organics is air stripping, a.k.a. Packed Tower Aeration or PTA. This method is very reliable and is used at two sites contaminated with TCE. A third method is Sequestering: the use of chemicals to prevent mineral compounds like iron and manganese from forming in the distribution system and causing staining of appliances and clothing.

In order to ensure that your drinking water is safe, we add sodium hypochlorite (Chlorine) as a disinfectant to protect you from bacteria. Chlorine is injected into the discharge line of the well prior to entering the distribution system. At this time approximately 65% of our wells are treated. In the next two years, all city wells will be treated in this way.

In 1989, the Water Division assumed operational responsibility for the County Water Districts within Fresno City limits. Several of these districts provided fluoride treatment at their well sites. The City continues to operate these fluoride treatment units at 26 well sites, primarily in the northwest area of town. This applies only to some Fresno County residents. Fresno City residents do not receive fluoride in their water at this time.

# Water Quality

ANNUAL REPORT 2000

## Tell Us What You Think!

We want to hear from you.

How can we serve you better?

Mail or email your

suggestions to:

**City of Fresno**

**Water Division**

1910 E. University Ave.

Fresno, CA 93703-2988

email: noral@ci.fresno.ca.us

A translation of this report in Spanish can be requested by calling

**498-4136**

## Facts About Drinking Water Standards

Under the 1974 Safe Drinking Water Act, the United States Environmental Protection Agency and the California Department of Health Services were charged with the responsibility of setting and implementing safe drinking water standards. Congress reauthorized this act in 1996. One hundred compounds are now regulated; another 48 are subject to monitoring. Fortunately, only a small number of these compounds have ever been detected in Fresno's water supply.

### *Is Fresno's water quality monitoring reliable?*

Yes! The City of Fresno's Water Division has an extensive, ongoing water quality monitoring program. In 1999 alone, the Water Division spent about $300,000 for the analysis of water samples by independent laboratories. It is the intention of the City to detect potential contaminants before any health impacts occur.

### *What happens in Fresno if a well exceeds EPA or DHS standards?*

If a well violates standards, it is removed from service and an alternate water supply is provided. In the event a well exceeds standards but must stay in service, customers who receive water from that well would be directly notified by mail or by hand-delivered flyers.

### *Does the presence of contaminants indicate a health risk?*

Not necessarily. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

### *May some people be more vulnerable to health risks than others?*

Yes! Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

City of FRESNO
**DEPARTMENT OF PUBLIC UTILITIES**
**WATER DIVISION**
1910 EAST UNIVERSITY • FRESNO, CA 93703-2988

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